

# List of Plants

## C ALPHA-THUJENE

Chemid

ALPHATHUJENE

\*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	Plant Part	Low PPM	High PPM	StdDev	*Reference
Abies alba	Leaf	--	--		*
Achillea millefolium	Leaf	--	--		*
Acinos alpinus	Ah	--	1.0		Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinus alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Acinos alpinus	Shoot	--	1.0	-0.54	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinus alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Anethum graveolens	Leaf Essent. Oil	--	33400.0	1.38	*
Anethum graveolens	Seed	36.0	231.0	-0.09	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Anethum graveolens	Fruit	36.0	231.0	-0.38	*
Anethum graveolens	Shoot Essent. Oil	--	10600.0	0.62	*
Anethum graveolens	Leaf	10.0	25.0	-0.37	*
Anethum graveolens	Essential Oil	--	--		*
Angelica archangelica	Root	1.0	13.0		*
Angelica archangelica	Root Essent. Oil	--	--		*
Artemisia annua	Plant	--	6500.0	3.41	*
Boswellia serrata	Essential Oil	--	500000.0	2.83	*
Boswellia serrata	Resin, Exudate, Sap	--	80000.0	-1.0	Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
Boswellia sacra	Essential Oil	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Boswellia sacra	Resin, Exudate, Sap	--	192300.0	1.0	Chiavari, G., Galletti, G. C., Piccaglia, R., Mohamud, M. A. 1991. Differentiation Between Resins Boswellia carterii and Boswellia frereana (Frankincense) of Somali Origin. J. Essent. Oil Res. 3 (3):185-186.
Brassica oleracea var. capitata l.	Shoot	--	18.0	-0.23	*
Callicarpa americana	Leaf	--	1.0	-0.61	*
Capsicum annum	Fruit	--	--		*
Carum carvi	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Chrysanthemum parthenium	Shoot	--	15.0	-0.29	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
Cinnamomum verum	Leaf	--	19.0	-0.43	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
Citrus reticulata	Fruit	1.0	2.0	-0.59	*

<i>Citrus limon</i>	Essential Oil	16.0	40.0	-0.4	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Citrus limon</i>	Petiole	--	20.0	*	
<i>Citrus sinensis</i>	Fruit	0.7	1.0	-0.6	*
<i>Citrus aurantifolia</i>	Fruit	--	40.0	-0.56	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Coleus barbatus</i>	Root Essent. Oil	--	3000.0	-0.77	Jim Duke's personal files.
<i>Coriandrum sativum</i>	Essential Oil	--	--	*	
<i>Coriandrum sativum</i>	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Coridothymus capitatus</i>	Shoot	--	22.0	-0.16	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. <i>Z. Lebensm Unters Forsch</i> 197: 20-23.
<i>Crocus sativus</i>	Silk Stigma Style	--	--		*
<i>Croton eluteria</i>	Bark	--	--		*
<i>Croton lechleri</i>	Plant	--	--		Taylor, Leslie. 2005. <i>The Healing Power of Rainforest Herbs</i> . SquareOne Publisher, Garden City Park, NY. 519 pp.
<i>Cuminum cyminum</i>	Fruit	--	24.0	-0.57	*
<i>Cuminum cyminum</i>	Seed	--	24.0	-1.18	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Daucus carota</i>	Shoot	--	12.0	-0.34	*
<i>Elettaria cardamomum</i>	Root Essent. Oil	--	11000.0	-0.64	*
<i>Elettaria cardamomum</i>	Plant	1330.0	3047.0	1.3	*
<i>Elettaria cardamomum</i>	Fruit	1330.0	3047.0	2.22	Duke, J. A. and duCellier, J. L. 1993. <i>CRC Handbook of Alternative Cash Crops</i> . CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
<i>Elsholtzia pilosa</i>	Shoot	--	1.4	-0.53	*
<i>Ephedra sinica</i>	Shoot	--	--		*
<i>Eucalyptus punctata</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus occidentalis</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus maidenii</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus diversicolor</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus astringens</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus citriodora</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus sideroxylon</i>	Shoot	--	40.0	0.16	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus polyanthemos</i>	Shoot	--	50.0	0.34	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus moluccana</i>	Shoot	--	170.0	2.51	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus maculata</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus dealbata</i>	Shoot	--	105.0	1.34	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus bosistoana</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus albens</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus camaldulensis</i>	Shoot	--	110.0	1.43	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus siderophloia</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.

oviformis					Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Eucalyptus melliodora</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Eucalyptus globulus</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Eucalyptus cladocalyx</i>	Shoot	--	10.0	-0.38	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Eucalyptus blakelyi</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Eucalyptus botryoides</i>	Shoot	--	0.1	-0.56	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Foeniculum vulgare</i>	Fruit	--	--		*
<i>Foeniculum vulgare</i>	Seed	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
<i>Hyptis suaveolens</i>	Shoot	--	21.0	-0.18	Mallavarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. J. Ess. Oil Res. 5: 321.
<i>Hyptis suaveolens</i>	Shoot	--	21.0	-0.18	Mallavarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. J. Ess. Oil Res. 5: 321.
<i>Hyssopus officinalis</i>	Shoot	--	30.0	-0.02	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	0.1	-0.56	Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. J. Ess. Oil Res. 5: 609-611.
<i>Hyssopus officinalis</i>	Shoot	--	50.0	0.34	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	30.0	-0.02	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	20.0	-0.2	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	60.0	0.52	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	30.0	-0.02	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	30.0	-0.02	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	--		Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. J. Ess. Oil Res. 5: 609-611.
<i>Hyssopus officinalis</i>	Shoot	--	--		Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	--		Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	20.0	-0.2	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop ( <i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
<i>Juniperus communis</i>	Fruit	24.0	240.0	-0.37	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Juniperus virginiana</i>	Leaf	--	--		*
<i>Juniperus sabina</i>	Plant	--	--		*
<i>Laurus nobilis</i>	Flower	--	12.6	-1.0	*
<i>Laurus nobilis</i>	Leaf	--	5.7	-0.56	*
<i>Laurus nobilis</i>	Leaf Essent. Oil	--	--		*
<i>Laurus nobilis</i>	Wood	--	--		*
<i>Laurus nobilis</i>	Bark	--	--		*
<i>Lavandula latifolia</i>	Plant	1.0	19.0	-0.55	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Leonotis leonurus</i>	Se	--	2.0		Pedro, L.G., Barroso, J.G., Marques, N.T., Ascenso, L., Pais, M.S.S. and Scheffer, J.J.C. 1991. Composition of the Essential Oil from Sepals of <i>Leonotis leonurus</i> R. Br. J. Ess. Oil Res. 3: 451-3
<i>Lepechinia calycina</i>	Plant	--	10.0	-0.56	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Melaleuca alternifolia</i>	Leaf	--	76.0	0.14	*
<i>Melaleuca alternifolia</i>	Root Essent. Oil	--	133000.0	1.41	*

<i>alternifolia</i>	Oil				
<i>Melaleuca linariifolia</i>	Leaf	150.0	200.0	1.39	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
<i>Mentha spicata</i>	Leaf	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Mentha spicata</i>	Essential Oil	--	--		*
<i>Mentha arvensis</i> var. <i>piperascens</i>	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Micromeria fruticosa</i>	Shoot	--	7.0	-0.43	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of Micromeria fruticosa (L.) Druce subsp. <i>barbata</i> (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
<i>Micromeria varia</i>	Shoot	--	15.0	-0.29	Pedro, L.G., et al. 1995. Composition of the Essential oil of <i>Micromeria varia</i> Benth. ssp. <i>thymoides</i> (Sol. ex Lowe) Perez var. <i>thymoides</i> , and endemic species of the Madeira Archipelago. <i>flav. &amp; Fragr. J.</i> 10(3): 199-202.
<i>Micromeria fruticosa</i>	Shoot	--	7.0	-0.43	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of <i>Micromeria fruticosa</i> (L.) Druce subsp. <i>barbata</i> (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
<i>Micromeria varia</i>	Shoot	--	15.0	-0.29	*
<i>Monarda didyma</i>	Plant	2.0	20.0	-0.55	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda punctata</i>	Plant	220.0	720.0	-0.12	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda fistulosa</i>	Plant	3.0	2480.0	0.95	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Murraya koenigii</i>	Leaf	--	37.0	-0.25	*
<i>Myristica fragrans</i>	Seed	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
<i>Myristica fragrans</i>	Seed Essent. Oil	--	30000.0	1.0	*
<i>Myrtus communis</i>	Shoot	2.0	18.0	-0.23	*
<i>Ocimum gratissimum</i>	Plant	50.0	445.0	-0.29	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Origanum onites</i>	Shoot	--	33.0	0.04	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. <i>Z. Lebensm Unters Forsch</i> 197: 20-23.
<i>Origanum majorana</i>	Essential Oil	--	19000.0	-0.28	*
<i>Origanum syriacum</i>	Shoot	--	--	-0.56	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. <i>J. Ess. Oil Res.</i> 3: 121-123.
<i>Origanum vulgare</i>	Shoot	--	315.0	5.12	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. <i>Z. Lebensm Unters Forsch</i> 197: 20-23.
<i>Origanum syriacum</i>	Shoot	--	--	-0.56	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. <i>J. Ess. Oil Res.</i> 3: 121-123.
<i>Origanum onites</i>	Plant	--	16.0	-0.56	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Origanum vulgare</i>	Shoot Essent. Oil	--	11200.0	0.79	*
<i>Origanum syriacum</i>	Shoot	--	--	-0.56	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. <i>J. Ess. Oil Res.</i> 3: 121-123.
<i>Origanum majorana</i>	Plant	15.0	1100.0	0.11	*
<i>Origanum minutiflorum</i>	Shoot	5.0	7.0	-0.43	Baser, K.H.C., Tumen, G., Sezik, E. 1991. The Essential Oil of <i>Origanum minutiflorum</i> O. Schwarz and P.H. Davis. <i>J. Ess. Oil Res.</i> 3: 445-446.
<i>Origanum vulgare</i>	Plant	6.0	32.0	-0.55	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pastinaca sativa</i>	Root	--	--		*
<i>Petroselinum crispum</i>	Seed	4.0	490.0	1.27	*
<i>Petroselinum crispum</i>	Fruit Essent. Oil	1000.0	2600.0	-0.73	*
<i>Petroselinum crispum</i>	Leaf	--	0.1	-0.62	*
<i>Petroselinum crispum</i>	Seed Essent. Oil	--	7000.0	-1.0	*

<i>Reunius obovatus</i>	Leaf	3.0	10.0	-0.44	
<i>Pimenta dioica</i>	Fruit	--	14.0	-0.58	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pimenta racemosa</i>	Plant	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pimenta dioica</i>	Leaf	--	20.0	-0.42	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pimpinella anisum</i>	Essential Oil	--	--		*
<i>Pinus sylvestris</i>	Leaf Essent. Oil	--	--		*
<i>Piper cubeba</i>	Fruit	1100.0	2200.0	1.44	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Piper auritum</i>	Leaf	--	--		Tramil
<i>Piper nigrum</i>	Fruit Essent. Oil	7300.0	29000.0	-0.23	*
<i>Piper nigrum</i>	Fruit	--	--		*
<i>Piper cubeba</i>	Fruit Essent. Oil	120000.0	130000.0	1.69	*
<i>Plectranthus amboinicus</i>	Plant	--	--		*
<i>Porophyllum ruderale</i>	Plant	--	15.0	-0.56	Loayza, I., de Groot, W., Lorenzo, D. et al. 1999. Composition of the essential oil of <i>Porophyllum ruderale</i> (Jacq.) Cass. from Bolivia. <i>Flav. &amp; Fragr. J.</i> 14: 393-8.
<i>Pycnanthemum montanum</i>	Shoot	28.0	32.0	0.02	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Rosmarinus officinalis</i>	Plant	1.0	475.0	-0.27	*
<i>Rosmarinus officinalis</i>	Shoot Essent. Oil	--	3500.0	-1.41	*
<i>Rosmarinus eriocalyx</i>	Shoot	33.0	52.0	0.38	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Rosmarinus x lavandulaceus</i>	Shoot	0.1	30.0	-0.02	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Rosmarinus officinalis</i>	Shoot	12.0	50.0	0.34	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Rosmarinus tomentosus</i>	Shoot	16.0	30.0	-0.02	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Rosmarinus officinalis</i>	Shoot	--	1.0	-0.54	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. <i>Flavor and Fragrance Journal</i> , 1: 137-142. 1986.
<i>Rosmarinus officinalis</i>	Leaf Essent. Oil	--	--		*
<i>Rosmarinus eriocalyx</i>	Shoot	33.0	52.0	0.38	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Rosmarinus x mendizabalii</i>	Shoot	0.1	22.0	-0.16	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Rosmarinus officinalis</i>	Shoot	37.0	90.0	1.07	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Salvia officinalis</i>	Leaf Essent. Oil	--	13800.0	-0.42	*
<i>Salvia gilliesii</i>	Shoot	--	2.5	-0.51	Velasco-Negueruela, A. et al. 1993. The Essential Oil of <i>Salvia gilliesii</i> Benth. <i>J. Ess. Oil Res.</i> 5: 319-320.
<i>Salvia dorisiana</i>	Shoot	2.3	2.9	-0.5	Tucker, A.O. & Maciarello, M.J. 1994. The Essential Oil of <i>Salvia dorisiana</i> Standley. <i>J. Ess. Oil Res.</i> 6: 97-8.
<i>Salvia officinalis</i>	Leaf	--	386.0	3.25	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Salvia officinalis</i>	Essential Oil	--	1200.0	-0.39	*
<i>Satureja obovata</i>	Leaf	--	--		Arreola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of

Satureja obovata	Leaf	--	65.0	0.03	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Satureja montana	Plant	5.0	300.0	-0.38	*
Satureja obovata	Leaf	--	65.0	0.03	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Satureja montana	Essential Oil	--	7400.0	-0.35	*
Satureja thymbra	Shoot	--	295.0	4.76	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Satureja obovata	Leaf	--	--		Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Satureja cuneifolia	Shoot	--	10.0	-0.38	Tumen, G. 1991. The Volatile Constituents of Satureja cuneifolia. J. Ess. Oil Res., 3: 365-366.
Sideritis mugronensis	Flower	35.0	45.0	1.0	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
Sideritis pauli	Shoot	--	10.0	-0.38	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.
Sideritis mugronensis	Leaf	4.0	6.0	-0.56	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
Syzygium aromaticum	Fruit	--	--		*
Tagetes filifolia	Shoot	--	4.7	-0.47	*
Tagetes minuta	Essential Oil	--	800.0	-0.4	*
Tanacetum parthenium	Essential Oil	--	6000.0	-0.36	*
Tanacetum parthenium	Fruit Essent. Oil	--	2000.0	-0.74	*
Tanacetum parthenium	Shoot	--	15.0	-0.29	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
Teucrium oxylepis	Shoot	--	--		Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium salviastrum	Shoot	--	--		Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium asiaticum	Shoot	--	0.1	-0.56	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium polium	Shoot	--	7.0	-0.43	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian Teucrium Species. J. Ess. Oil Res. 5: 397-402.
Teucrium pseudoscorodonia	Shoot	--	--		Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium oxylepis	Shoot	--	0.07	-0.56	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium gnaphalodes	Shoot	--	5.0	-0.47	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian Teucrium Species. J. Ess. Oil Res. 5: 397-402.
Teucrium scorodonia	Shoot	--	0.13	-0.55	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Thymus vulgaris	Essential Oil	--	9200.0	-0.34	*
Thymus capitatus	Plant	60.0	190.0	-0.45	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus funkii	Shoot	--	65.0	0.62	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of Thymus funkii Cousson. Flav. & Fragr. J. 10(6): 379-383.
Thymus orospedanus	Plant	--	--		J. Nat. Prod.
Thymus funkii	Shoot	--	65.0	0.62	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of Thymus funkii Cousson. Flav. & Fragr. J. 10(6): 379-383.
Thymus zygis	Shoot	--	0.1	-0.56	Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JE05: 153-8.
Thymus masticina	Plant	--	40.0	-0.54	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus riatarum	Shoot	--	120.0	1.61	Iglesias, J., Vila, R., Caniguer, S., Bellakdhar, and II Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. J. Ess. Oil Res. 3: 43-4.
Thymus serpyllum	Plant	15.0	306.0	-0.38	*
Trichostemma	Shoot	--	35.0	0.07	Tucker, A.O. and Maciarello, M.J. 1990. The Essential Oil of Trichostemma dichotomum. J. Ess. Oil

Vitex agnus-castus	Leaf Essent. Oil	--	7900.0	-0.96	Jim Duke's personal files.
Vitex agnus-castus	Fruit	--	--		Jim Duke's personal files.
Vitex agnus-castus	Leaf	--	1.4	-0.6	Ekundayo, O., Laakso, I., Holopainen, M., Hiltunen, R., Oguntiemein, B., and Kauppinen, V. 1990. The Chemical Composition and Antimicrobial Activity of the Leaf Oil of Vitex agnus-castus L. J. Essential Oil Research, 2: 115-119.
Vitex agnus-castus	Flower	--	--		Jim Duke's personal files.